

Title (en)
NEURAL NETWORK CIRCUIT

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Application
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Abstract (en)
[origin: EP0533193A2] In a multilayered neural network for recognizing and processing characteristic data of images and the like by carrying out network arithmetical operations, characteristic data memories 107, 108 and 109 store the characteristic data of the layers. Coefficient memories 101, 102 and 103 store respective coupling coefficients of the layers other than the last layer. A weight memory 118 stores weights of neurons of the last layer. Address converters 104, 105 and 106 carry out arithmetical operations to find out addresses of nets of the network whose coupling coefficients are significant. A table memory 112 outputs a total coupling coefficient obtained by inter-multiplying the significant coupling coefficients read out from the coefficient memories 101, 102 and 103 of the layers. A cumulative operation unit 113 performs cumulative additions of the product of the total coupling coefficient times the weight of the weight memory. Arithmetical operations are carried out only on particular nets with a significant coupling coefficient value. The speed of operation and recognition can be improved. <IMAGE>

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Citation (search report)
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